WHAT IS CLAIMED IS:

1. A composition for lanthionizing keratinous fibers to achieve relaxation of said keratinous fibers comprising:

(i) at least one hydroxide compound; and

(ii) at least one reducing agent chosen from thiols, sulfites, and derivatives thereof,

wherein said at least one hydroxide compound and said at least one reducing agent are present in a combined amount effective to relax keratinous fibers, and

with the proviso that if said at least one reducing agent is chosen from cysteine, cysteine derivatives, and thioglycolic acid, said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion is less than 1% by weight relative to the total weight of said composition.

2. A composition according to claim 1, wherein said at least one hydroxide compound is chosen from alkali metal hydroxides, alkaline earth metal hydroxides, transition metal hydroxides, lanthanide metal hydroxides, actinide metal hydroxides, Group III hydroxides, Group IV hydroxides, Group V hydroxides, Group VI hydroxides, organic hydroxides, and compounds comprising at least one hydroxide substituent which is at least partially hydrolyzable.

3. A composition according to claim 2, wherein said at least one hydroxide compound is chosen from sodium hydroxide, lithium hydroxide, and potassium hydroxide.

4. A composition according to claim 3, wherein said at least one hydroxide compound is sodium hydroxide.

5. A composition according to claim 1, wherein said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion ranges from 0.05% to 3% by weight relative to the total weight of said composition.

6. A composition according to claim 5, wherein said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion ranges from 0.1% to 1% by weight relative to the total weight of said composition.

7. A composition according to claim 1, wherein said thiols are chosen from thioglycolates, thiolactates, thiolglycerols, thiocarboxylic acids, thioesters, thioamides, alkyl mercaptans, and cysteine.

8. A composition according to claim 7, wherein said at least one reducing agent is chosen from thioglycolates.

9. A composition according to claim 8, wherein said thioglycolates are ammonium thioglycolate.

10. A composition according to claim 1, wherein said sulfites are chosen from hydrogen sulfite, organic sulfites and inorganic sulfites.

11. A composition according to claim 1, wherein said at least one reducing agent is present in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

12. A composition according to claim 1, further comprising at least one cation exchange composition.

13. A composition according to claim 12, wherein said at least one cation exchange composition is chosen from clays.

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14. A composition according to claim 12, wherein said at least one cation exchange composition is chosen from silicates.

15. A composition according to claim 14, wherein said silicates are chosen from analcime, chabazite, gmelinite, harmotome, levynite, mordenite, epistilbite, heulandite, natrolite, stilbite, edingtonite, mesolite, scolecite, thomosonite, brewsterite, faujasite, gismondine, laumontite, phillipsite, and aluminosilicate.

16. A composition according to claim 14, wherein said silicates are chosen from zeolites.

17. A composition according to claim 14, wherein said silicates are chosen from zeolite clays.

18. A composition according to claim 1, further comprising at least one solvent.

19. A composition according to claim 18, wherein said at least one solvent is chosen from DMSO and water.

20. A composition according to claim 1, further comprising at least one complexing agent effective for dissociating the at least one hydroxide compound in a sufficient quantity to effect lanthionization of keratinous fibers.

21. A composition according to claim 20, wherein said at least one complexing agent is chosen from chelating agents, sequestering agents and salts of any of the foregoing.

22. A composition according to claim 20, wherein said dissociation is chosen from partial dissociation and full dissociation.

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23. A composition according to claim 20, wherein at least one entity chosen from said least one hydroxide compound and said at least one complexing agent is formulated with at least one reducing agent.

24. A composition according to claim 21, wherein said chelating agents are chosen from ethylene-diaminetetraacetic acid (EDTA), nitrilotriacetic acid and ethylenegylcol-bis(β-amino-ethyl ether)-N,N-tetraacetic acid.

25. A composition according to claim 21, wherein said sequestering agents are chosen from hydroxy carboxylic acids.

26. A composition according to claim 25, wherein said hydroxy carboxylic acids are chosen from gluconic acid, citric acid and tartaric acid.

27. A composition according to claim 21, wherein said at least one complexing agent is chosen from amino acids and crown ethers.

28. A composition according to claim 27, wherein said amino acids are monosodium glutamate.

29. A composition according to claim 21, wherein said at least one complexing agent is chosen from phosphates demonstrating chelating properties, phosphates demonstrating sequestering properties, phosphonates demonstrating chelating properties, phosphonates demonstrating sequestering properties, silicates demonstrating chelating properties and silicates demonstrating sequestering properties.

30. A composition according to claim 29, wherein said at least one complexing agent is chosen from tripotassium phosphate and trisodium phosphate.

31. A composition according to claim 29, wherein said at least one

complexing agent is chosen from disodium silicate and dipotassium silicate.

32. A composition according to claim 20, wherein said at least one complexing agent is chosen from organic acids and salts thereof.

33. A composition according to claim 20, wherein said at least one complexing agent is chosen from mono-hydroxycarboxylic acids, dihydroxycarboxylic acids, polyhydroxycarboxylic acids, mono-aminocarboxylic acids, di-aminocarboxylic acids, poly-aminocarboxylic acids, mono-hydroxysulfonic acids, di-hydroxysulfonic acids, polyhydroxysulfonic acids, mono-hydroxyphosphonic acids, dihydroxyphosphonic acids, polyhydroxyphosphonic acids, mono-aminophosphonic acids, diaminophosphonic acids and polyaminophosphonic acids.

34. A composition according to claim 20, wherein said at least one complexing agent is chosen from ethylene diamine tetraacetic acid (EDTA), N–(hydroxyethyl) ethylene diamine triacetic acid, aminotrimethylene phosphonic acid, diethylenetriamine-pentaacetatic acid, lauroyl ethylene diamine triacetic acid, nitrilotriacetic acid, iminodisuccinic acid, tartaric acid, citric acid, N-2-hydroxyethyliminodiacetic acid and salts of any of the foregoing.

35. A composition according to claim 34, wherein said at least one complexing agent is chosen from sodium EDTA, lithium EDTA, potassium EDTA and guanidine EDTA.

36. A composition according to claim 20, wherein said at least one complexing agent and said at least one hydroxide compound form at least one complexing agent-counter ion complex.

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37. A composition according to claim 20, wherein said composition comprises at least two complexing agents.

38. A composition according to claim 1, further comprising at least one additive chosen from dyes, anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, fragrances, silicones, silicone derivatives, screening agents, preserving agents, proteins, vitamins, polymers, plant oils, mineral oils and synthetic oils.

39. A composition according to claim 1, wherein said composition is in a form chosen from an oil-in-water emulsion, a water-in-oil emulsion, a dispersion, a suspension, a cream, a foam, a gel, a spray, a powder and a liquid.

40. A composition according to claim 1, wherein said keratinous fibers is chosen from hair.

41. A composition according to claim 1, wherein said composition is heat-activated.

42. A composition for lanthionizing keratinous fibers to achieve relaxation of said keratinous fibers comprising:

(i) at least one hydroxide compound; and

(ii) at least one reducing agent chosen from thiols, sulfites, and derivatives thereof,

wherein said at least one hydroxide compound and said at least one reducing agent are present in a combined amount effective to relax keratinous fibers, and

wherein said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion ranges from 0.1% to 1% by weight relative to the total weight of said composition.

43. A method for lanthionizing keratinous fibers to achieve relaxation of said keratinous fibers comprising:

(i) generating hydroxide ions in at least one solvent, wherein said step of generating comprises combining in said at least one solvent at least one hydroxide compound and at least one reducing agent chosen from thiols, sulfites, and derivatives thereof;

(ii) applying a composition comprising said generated hydroxide ions to keratinous fibers for a sufficient period of time to lanthionize said keratinous fibers; and

(iii) heating said keratinous fibers,

wherein said at least one hydroxide compound and said at least one reducing agent are present in a combined amount effective to relax keratinous fibers,

further wherein said composition is applied prior to said heating or during said heating, and

with the proviso that said method does not comprise an oxidation treatment subsequent to said heating.

44. A method according to claim 43, further comprising shampooing said at least one keratinous fiber subsequent to said heating.

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45. A method according to claim 44, further comprising rinsing said at least one keratinous fiber subsequent to said shampooing.

46. A method according to claim 43, further comprising rinsing said at least one keratinous fiber prior to said shampooing.

47. A method according to claim 43, wherein said composition is applied prior to said heating and during said heating.

48. A method according to claim 43, wherein said at least one hydroxide compound is chosen from alkali metal hydroxides, alkaline earth metal hydroxides, transition metal hydroxides, lanthanide metal hydroxides, actinide metal hydroxides, Group III hydroxides, Group IV hydroxides, Group V hydroxides, Group VI hydroxides, organic hydroxides, and compounds comprising at least one hydroxide substituent which is at least partially hydrolyzable.

49. A method according to claim 48, wherein said at least one hydroxide compound is chosen from sodium hydroxide, lithium hydroxide, and potassium hydroxide.

50. A method according to claim 49, wherein said at least one hydroxide compound is sodium hydroxide.

51. A method according to claim 43, wherein said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion ranges from 0.05% to 3% by weight relative to the total weight of said composition.

52. A method according to claim 51, wherein said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion ranges from 0.1% to 1% by weight relative to the total weight of said composition.

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53. A method according to claim 43, wherein said thiols are chosen from thioglycolates, thiolactates, thiolglycerols, thiocarboxylic acids, thioesters, thioamides, alkyl mercaptans, and cysteine.

54. A method according to claim 53, wherein said at least one reducing agent is chosen from thioglycolates.

55. A method according to claim 54, wherein said thioglycolates are ammonium thioglycolate.

56. A method according to claim 43, wherein said sulfites are chosen from hydrogen sulfite, organic sulfites and inorganic sulfites.

57. A method according to claim 43, wherein said at least one reducing agent is present in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

58. A method according to claim 43, wherein said at least one solvent is chosen from DMSO and water.

59. A method according to claim 43, wherein said composition further comprises at least one cation exchange composition.

60. A method according to claim 59, wherein said at least one cation exchange composition is chosen from clays.

61. A method according to claim 60, wherein said at least one cation exchange composition is chosen from silicates.

62. A method according to claim 61, wherein said silicates are chosen from analcime, chabazite, gmelinite, harmotome, levynite, mordenite, epistilbite,

heulandite, natrolite, stilbite, edingtonite, mesolite, scolecite, thomosonite, brewsterite, faujasite, gismondine, laumontite, phillipsite, and aluminosilicate.

63. A method according to claim 61, wherein said silicates are chosen from zeolites.

64. A method according to claim 61, wherein said silicates are chosen from zeolite clays.

65. A method according to claim 43, wherein said composition further comprises at least one complexing agent effective for dissociating said at least one hydroxide compound in a sufficient quantity to effect lanthionization of said keratinous fibers.

66. A method according to claim 65, wherein said at least one complexing agent is chosen from chelating agents, sequestering agents and salts of any of the foregoing.

67. A method according to claim 65, wherein said dissociation is chosen from partial dissociation and full dissociation.

68. A method according to claim 65, wherein at least one entity chosen from said least one hydroxide compound and said at least one complexing agent is formulated with at least one reducing agent.

69. A method according to claim 66, wherein said chelating agents are chosen from ethylene-diaminetetraacetic acid (EDTA), nitrilotriacetic acid and ethylenegylcol-bis(β-amino-ethyl ether)-N,N-tetraacetic acid.

70. A method according to claim 66, wherein said sequestering agents are chosen from hydroxy carboxylic acids.

71. A method according to claim 70, wherein said hydroxy carboxylic acids are chosen from gluconic acid, citric acid and tartaric acid.

72. A method according to claim 65 wherein said at least one complexing agent is chosen from amino acids and crown ethers.

73. A method according to claim 72, wherein said amino acids are monosodium glutamate.

74. A method according to claim 65, wherein said at least one complexing agent is chosen from phosphates demonstrating chelating properties, phosphates demonstrating sequestering properties, silicates demonstrating chelating properties, and silicates demonstrating sequestering properties.

75. A method according to claim 74, wherein said at least one complexing agent is chosen from tripotassium phosphate and trisodium phosphate.

76. A method according to claim 74, wherein said at least one complexing agent is chosen from disodium silicate and dipotassium silicate.

77. A method according to claim 65, wherein said at least one complexing agent is chosen from organic acids and salts thereof.

78. A method according to claim 77, wherein said at least one complexing agent is chosen from mono-hydroxycarboxylic acids, dihydroxycarboxylic acids, polyhydroxycarboxylic acids, mono-aminocarboxylic acids, di-aminocarboxylic acids, poly-aminocarboxylic acids, mono-hydroxysulfonic acids, di-hydroxysulfonic acids, polyhydroxysulfonic acids, mono-hydroxyphosphonic acids, dihydroxyphosphonic acids, polyhydroxyphosphonic

acids, mono-aminophosphonic acids, diaminophosphonic acids and polyaminophosphonic acids.

79. A method according to claim 65, wherein said at least one complexing agent is chosen from ethylene diamine tetraacetic acid (EDTA), N–(hydroxyethyl) ethylene diamine triacetic acid, aminotrimethylene phosphonic acid, diethylenetriamine-pentaacetatic acid, lauroyl ethylene diamine triacetic acid, nitrilotriacetic acid, iminodisuccinic acid, tartaric acid, citric acid, N-2-hydroxyethyliminodiacetic acid and salts of any of the foregoing.

80. A method according to claim 79, wherein said at least one complexing agent is chosen from sodium EDTA, lithium EDTA, potassium EDTA and guanidine EDTA.

81. A method according to claim 65, wherein said at least one complexing agent and said at least one hydroxide compound form at least one complexing agent-counter ion complex.

82. A method according to claim 65, wherein said composition comprises at least two complexing agents.

83. A method according to claim 43, wherein said composition further comprises at least one additive chosen from dyes, anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, fragrances, silicones, silicone derivatives, screening agents, preserving agents, proteins, vitamins, plant oils, mineral oils and synthetic oils.

84. A method according to claim 43, wherein said composition is in a form chosen from an oil-in-water emulsion, a water-in-oil emulsion, a dispersion, a suspension, a cream, a foam, a gel, a spray, a powder and a liquid.

85. A method according to claim 43, wherein said keratinous fibers are hair.

86. A method for lanthionizing keratinous fibers to achieve relaxation of said keratinous fibers comprising:

(i) generating hydroxide ions in at least one solvent, wherein said step of generating comprises combining in said at least one solvent at least one hydroxide compound and at least one reducing agent chosen from thiols, sulfites, and derivatives thereof;

(ii) applying a composition comprising said generated hydroxide ions to keratinous fibers for a sufficient period of time to lanthionize said keratinous fibers; and

(iii) heating said keratinous fibers,

wherein said at least one hydroxide compound and said at least one reducing agent are present in a combined amount effective to relax keratinous fibers,

further wherein said composition is applied prior to said heating or during said heating, and

with the proviso that if said at least one reducing agent is chosen from thioglycolic acid, said at least one hydroxide compound is present in an amount

such that the concentration of hydroxide ion is less than 1% by weight relative to the total weight of said composition.

87. A method according to claim 86, further comprising shampooing said at least one keratinous fiber subsequent to said heating.

88. A method according to claim 87, further comprising rinsing said at least one keratinous fiber subsequent to said shampooing.

89. A method according to claim 86, further comprising rinsing said at least one keratinous fiber prior to said shampooing.

90 A method according to claim 86, wherein said composition is applied prior to said heating and during said heating.

91. A method according to claim 86, wherein said at least one hydroxide compound is chosen from alkali metal hydroxides, alkaline earth metal hydroxides, transition metal hydroxides, lanthanide metal hydroxides, actinide metal hydroxides, Group III hydroxides, Group IV hydroxides, Group V hydroxides, Group VI hydroxides, organic hydroxides, and compounds comprising at least one hydroxide substituent which is at least partially hydrolyzable.

92. A method according to claim 91, wherein said at least one hydroxide compound is chosen from sodium hydroxide, lithium hydroxide, and potassium hydroxide.

93. A method according to claim 92, wherein said at least one hydroxide compound is sodium hydroxide.

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94. A method according to claim 86, wherein said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion ranges from 0.05% to 3% by weight relative to the total weight of said composition.

95. A method according to claim 94, wherein said at least one hydroxide compound is present in an amount such that the amount of hydroxide ion ranges from 0.1% to 1% by weight relative to the total weight of said composition.

96. A method according to claim 86, wherein said thiols are chosen from thioglycolates, thiolactates, thiolglycerols, thiocarboxylic acids, thioesters, thioamides, alkyl mercaptans, and cysteine.

97. A method according to claim 96, wherein said at least one reducing agent is chosen from thioglycolates.

98. A method according to claim 97, wherein said thioglycolates are ammonium thioglycolate.

99. A method according to claim 86, wherein said sulfites are chosen from hydrogen sulfite, organic sulfites and inorganic sulfites.

100. A method according to claim 86, wherein said at least one reducing agent is present in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

101. A method according to claim 86, wherein said at least one solvent is chosen from DMSO and water.

102. A method according to claim 86, wherein said composition further comprises at least one cation exchange composition.

103. A method according to claim 102, wherein said at least one cation exchange composition is chosen from clays.

104. A method according to claim 103, wherein said at least one cation exchange composition is chosen from silicates.

105. A method according to claim 104, wherein said silicates are chosen from analcime, chabazite, gmelinite, harmotome, levynite, mordenite, epistilbite, heulandite, natrolite, stilbite, edingtonite, mesolite, scolecite, thomosonite, brewsterite, faujasite, gismondine, laumontite, phillipsite, and aluminosilicate.

106. A method according to claim 104, wherein said silicates are chosen from zeolites.

107. A method according to claim 104, wherein said silicates are chosen from zeolite clays.

108. A method according to claim 86, wherein said composition further comprises at least one complexing agent effective for dissociating said at least one hydroxide compound in a sufficient quantity to effect lanthionization of said keratinous fibers.

109. A method according to claim 108, wherein said at least one complexing agent is chosen from chelating agents, sequestering agents, and salts of any of the foregoing.

110. A method according to claim 108, wherein said dissociation is chosen from partial dissociation and full dissociation.

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111. A method according to claim 108, wherein at least one entity chosen from said least one hydroxide compound and said at least one complexing agent is formulated with at least one reducing agent.

112. A method according to claim 109, wherein said chelating agents are chosen from ethylene-diaminetetraacetic acid (EDTA), nitrilotriacetic acid and ethylenegylcol-bis(β-amino-ethyl ether)-N,N-tetraacetic acid.

113. A method according to claim 109, wherein said sequestering agents are chosen from hydroxy carboxylic acids.

114. A method according to claim 109, wherein said hydroxy carboxylic acids are chosen from gluconic acid, citric acid and tartaric acid.

115. A method according to claim 108, wherein said at least one complexing agent is chosen from amino acids and crown ethers.

116. A method according to claim 115, wherein said amino acids are monosodium glutamate.

117. A method according to claim 108, wherein said at least one complexing agent is chosen from phosphates demonstrating chelating properties, phosphates demonstrating sequestering properties, silicates demonstrating chelating properties and silicates demonstrating sequestering properties.

118. A method according to claim 117, wherein said at least one complexing agent is chosen from tripotassium phosphate and trisodium phosphate.

119. A method according to claim 117, wherein said at least one complexing agent is chosen from disodium silicate and dipotassium silicate.

120. A method according to claim 108, wherein said at least one

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complexing agent is chosen from organic acids and salts thereof.

121. A method according to claim 120, wherein said at least one complexing agent is chosen from mono-hydroxycarboxylic acids, dihydroxycarboxylic acids, polyhydroxycarboxylic acids, mono-aminocarboxylic acids, di-aminocarboxylic acids, poly-aminocarboxylic acids, mono-hydroxysulfonic acids, di-hydroxysulfonic acids, polyhydroxysulfonic acids, mono-hydroxyphosphonic acids, dihydroxyphosphonic acids, polyhydroxyphosphonic acids, mono-aminophosphonic acids, diaminophosphonic acids and polyaminophosphonic acids.

122. A method according to claim 108, wherein said at least one complexing agent is chosen from ethylene diamine tetraacetic acid (EDTA), N–(hydroxyethyl) ethylene diamine triacetic acid, aminotrimethylene phosphonic acid, diethylenetriamine-pentaacetatic acid, lauroyl ethylene diamine triacetic acid, nitrilotriacetic acid, iminodisuccinic acid, tartaric acid, citric acid, N-2-hydroxyethyliminodiacetic acid and salts of any of the foregoing.

123. A method according to claim 122, wherein said at least one complexing agent is chosen from sodium EDTA, lithium EDTA, potassium EDTA and guanidine EDTA.

124. A method according to claim 108, wherein said at least one complexing agent and said at least one hydroxide compound form at least one complexing agent-counter ion complex.

125. A method according to claim 108, wherein said composition comprises at least two complexing agents.

126. A method according to claim 86, wherein said composition further comprises at least one additive chosen from dyes, anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, fragrances, silicones, silicone derivatives, screening agents, preserving agents, proteins, vitamins, plant oils, mineral oils and synthetic oils.

127. A method according to claim 86, wherein said composition is is in a form chosen from an oil-in-water emulsion, a water-in-oil emulsion, a dispersion, a suspension, a cream, a foam, a gel, a spray, a powder and a liquid.

128. A method according to claim 86, wherein said keratinous fibers are hair.

129. A multicomponent kit for lanthionizing keratinous fibers to achieve relaxation of said keratinous fibers comprising:

(a) a first compartment comprising a first composition, and

(b) a second compartment comprising a second composition,

wherein said first composition comprises at least one hydroxide compound; and

wherein said second composition comprises at least one reducing agent chosen from thiols, sulfites, and derivatives thereof.

130. A multicomponent kit according to claim 129, wherein at least one of said first composition and said second composition further comprises at least one cation exchange composition.

131. A multicomponent kit according to claim 129, wherein at least one of said first composition and said second composition further comprises at least one

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complexing agent effective for dissociating the at least one hydroxide compound in a sufficient quantity to effect lanthionization of keratinous fibers.

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